

From the  
INTERNATIONAL PRELIMINARY EXAMINING AUTHORITY

**PCT**

To:

TBK-Patent  
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TBK - PATENT

NOTIFICATION OF TRANSMITTAL OF  
INTERNATIONAL PRELIMINARY  
REPORT ON PATENTABILITY  
(Chapter II of the Patent Cooperation Treaty)  
(PCT Rule 71.1)

Date of mailing  
(day/month/year)      20-09-2004

Applicant's or agent's file reference

**WO 33902**

**IMPORTANT NOTIFICATION**

International application No.

**PCT/IB2002/002428**

International filing date (day/month/year)

**26-06-2002**

Priority date (day/month/year)

Applicant

**Nokia Corporation  
et al**

1. The applicant is hereby notified that this International Preliminary Examining Authority transmits herewith the international preliminary report on patentability and its annexes, if any, established on the international application.
2. A copy of the report and its annexes, if any, is being transmitted to the International Bureau for communication to all the elected Offices.
3. Where required by any of the elected Offices, the International Bureau will prepare an English translation of the report (but not of any annexes) and will transmit such translation to those Offices.
4. **REMINDER**

The applicant must enter the national phase before each elected Office by performing certain acts (filing translations and paying national fees) within 30 months from the priority date (or later in some Offices) (Article 39(1)) (see also the reminder sent by the International Bureau with Form PCT/IB/301).

Where a translation of the international application must be furnished to an elected Office, that translation must contain a translation of any annexes to the international preliminary report on patentability. It is the applicant's responsibility to prepare and furnish such translation directly to each elected Office concerned.

For further details on the applicable time limits and requirements of the elected Offices, see Volume II of the *PCT Applicant's Guide*.

The applicant's attention is drawn to Article 33(5), which provides that the criteria of novelty, inventive step and industrial applicability described in Article 33(2) to (4) merely serve the purposes of international preliminary examination and that "any Contracting State may apply additional or different criteria for the purposes of deciding whether, in that State, the claimed invention is patentable or not" (see Also Article 27(5)). Such additional criteria may relate, for example, to exemptions from patentability, requirements for enabling disclosure, clarity and support for the claims.

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# PATENT COOPERATION TREATY

# PCT

## INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY (Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference <b>WO 33902</b>	<b>FOR FURTHER ACTION</b> See Form PCT/IPEA/416	
International application No. <b>PCT/IB 2002/002428</b>	International filing date ( <i>day/month/year</i> ) <b>26.06.2002</b>	Priority date ( <i>day/month/year</i> )
International Patent Classification (IPC) or national classification and IPC <b>H04Q 7/20, H04B 7/26</b>		
Applicant <b>Nokia Corporation et al</b>		

1.	This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.
2.	This REPORT consists of a total of <u>4</u> sheets, including this cover sheet.
3.	This report is also accompanied by ANNEXES, comprising: <div style="margin-left: 20px;"> <div style="display: flex; align-items: flex-start;"> <div style="margin-right: 10px;">a. <input checked="" type="checkbox"/></div> <div> <div style="margin-left: 20px;">(sent to the applicant and to the International Bureau) a total of <u>2</u> sheets, as follows:</div> <div style="margin-left: 20px;"> <input checked="" type="checkbox"/> sheets of the description, claims and/or drawings which have been amended and are the basis of this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions). <input type="checkbox"/> sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box. </div> </div> </div> <div style="margin-left: 20px; margin-top: 10px;"> b. <input type="checkbox"/> (sent to the International Bureau only) a total of (indicate type and number of electronic carrier(s)) _____, containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions). </div> </div>
4.	This report contains indications relating to the following items: <div style="margin-left: 20px;"> <div style="display: flex; align-items: flex-start;"> <div style="margin-right: 10px;"><input checked="" type="checkbox"/></div> <div>Box No. I      Basis of the report</div> </div> <div style="display: flex; align-items: flex-start; margin-top: 5px;"> <div style="margin-right: 10px;"><input type="checkbox"/></div> <div>Box No. II      Priority</div> </div> <div style="display: flex; align-items: flex-start; margin-top: 5px;"> <div style="margin-right: 10px;"><input type="checkbox"/></div> <div>Box No. III      Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</div> </div> <div style="display: flex; align-items: flex-start; margin-top: 5px;"> <div style="margin-right: 10px;"><input type="checkbox"/></div> <div>Box No. IV      Lack of unity of invention</div> </div> <div style="display: flex; align-items: flex-start; margin-top: 5px;"> <div style="margin-right: 10px;"><input checked="" type="checkbox"/></div> <div>Box No. V      Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</div> </div> <div style="display: flex; align-items: flex-start; margin-top: 5px;"> <div style="margin-right: 10px;"><input type="checkbox"/></div> <div>Box No. VI      Certain documents cited</div> </div> <div style="display: flex; align-items: flex-start; margin-top: 5px;"> <div style="margin-right: 10px;"><input type="checkbox"/></div> <div>Box No. VII      Certain defects in the international application</div> </div> <div style="display: flex; align-items: flex-start; margin-top: 5px;"> <div style="margin-right: 10px;"><input type="checkbox"/></div> <div>Box No. VIII      Certain observations on the international application</div> </div> </div>

Date of submission of the demand  <b>23.01.2004</b>	Date of completion of this report  <b>13.09.2004</b>
Name and mailing address of the IPEA/SE Patent- och registreringsverket Box 5055 S-102 42 STOCKHOLM Facsimile No. +46 8 667 72 88	Authorized officer  <b>Stefan Hansson /OGU</b> Telephone No. +46 8 782 25 00

# INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/IB 2002/002428

## Box No. I Basis of the report

1. With regard to the language, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.

☐ This report is based on a translation from the original language into the following language \_\_\_\_\_, which is the language of a translation furnished for the purposes of:

- ☐ international search (under Rules 12.3 and 23.1(b))  
☐ publication of the international application (under Rule 12.4)  
☐ international preliminary examination (under Rules 55.2 and/or 55.3)

2. With regard to the elements of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report)*:

☐ the international application as originally filed/furnished

☒ the description:

pages 1 - 18 as originally filed/furnished

pages\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_

pages\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_

☒ the claims:

pages \_\_\_\_\_ as originally filed/furnished

pages\* \_\_\_\_\_ as amended (together with any statement) under Article 19

pages\* 1 - 2 received by this Authority on 09.06.2004

pages\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_

☒ the drawings:

pages 1 - 6 as originally filed/furnished

pages\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_

pages\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_

☐ a sequence listing and/or any related table(s) – see Supplemental Box Relating to Sequence Listing.

3. ☐ The amendments have resulted in the cancellation of:

☐ the description, pages \_\_\_\_\_

☐ the claims, Nos. \_\_\_\_\_

☐ the drawings, sheets/figs \_\_\_\_\_

☐ the sequence listing (*specify*): \_\_\_\_\_

☐ any table(s) related to the sequence listing (*specify*): \_\_\_\_\_

4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).

☐ the description, pages \_\_\_\_\_

☐ the claims, Nos. \_\_\_\_\_

☐ the drawings, sheets/figs \_\_\_\_\_

☐ the sequence listing (*specify*): \_\_\_\_\_

☐ any table(s) related to the sequence listing (*specify*): \_\_\_\_\_

\* If item 4 applies, some or all of those sheets may be marked "superseded."

## INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/IB 2002/002428

**Box No. V** Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

## 1. Statement

Novelty (N)	Claims	<u>1-7</u>	YES
	Claims		NO
Inventive step (IS)	Claims	<u>1-7</u>	YES
	Claims		NO
Industrial applicability (IA)	Claims	<u>1-7</u>	YES
	Claims		NO

## 2. Citations and explanations (Rule 70.7)

The claimed invention

The claimed invention relates to a method for communication network performance analysis.

The claims have been amended.

The following documents were cited in the International Search Report:

D1: US 6442393 A  
D2: EP 431956 A  
D3: US 5920607 A  
D4: US 5598532 A  
D5: WO 9824208 A

D2 relates to a cellular radiotelephone diagnostic system. D2 describes in the abstract that when a call is received by a base station, the position of at least one of the mobile units operating within the geographic area is located. As a call is part of different services that may be supported by a cellular communication system, this is a subset of the possible service offered to the subscriber by a communication service.

The claimed invention differs from D2 in the following respect. According to D2, a call has to be received by a base station from a respective mobile unit. In other words, only ongoing calls are monitored.

According to the claimed invention, not only ongoing calls can be monitored but also refused service requests can be exploited for communication network analysis.

.../...

## Supplemental Box

In case the space in any of the preceding boxes is not sufficient.

Continuation of: BOX V.

D3-D5 all merely disclose the state of the art and are not commented on further.

Consequently, the claimed invention as in claims 1-7 is novel, considered to involve an inventive step and has industrial applicability.

Enclosure of June 9, 2004

PCT-Application No.: PCT/IB02/02428

Nokia Corporation et al.

Our ref.: WO 33902

**CLAIMS 1 to 7**

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1. A method for communication network performance analysis comprising the steps of

a) acquiring and storing information related to  
a1) service requests issued by terminals attached  
to said network,

a2) positions of said requesting terminals, and

a3) establishment of the requested service for  
said terminals,

b) matching, based on the position information, said  
information to a grid of unit areas, the grid of  
unit areas representing a geographical region in  
which said network is operated,

c) processing said information per unit area, and

d) outputting said processed information,

e) wherein said information related to the  
establishment of the service comprises at least a  
success indication indicating that said service was  
successfully established or not and at least one  
service attribute, and wherein

f) said processing comprises a step of logically  
combining said service request information and said  
success information.

2. A method according to claim 1, further comprising the  
step of

g) modifying communication network operating  
parameters based on said outputted processed  
information.



3. A method according to claim 1, wherein  
said processing comprises a further step of summing  
said at least one service attribute parameter.

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4. A method according to claim 1, wherein  
said processing comprises the further steps of  
sorting said stored information according to said  
at least one service attribute, thereby obtaining a  
10 plurality of information sets, each being  
representative of an individual service  
distinguishable by said at least one service  
attribute, and

15 selecting one of said information sets according  
to the service attribute for being output.

5. A method according to claim 1, 2, 3, or 4, wherein  
said acquired information is stored for a  
predetermined time.

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6. A method according to claim 1, 2, 3, or 4, wherein  
said processing comprises a step of filtering said  
stored information using a selectable time window.

25 7. A method according to claim 6 when dependent on claim 3,  
wherein said summed at least one service attribute  
parameter is divided by the time period defined by said  
selected time window.

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